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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/145,180 09/01/98 LI

J 23356-M5

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HM12/1030

EXAMINER

WANG, S

ART UNIT	PAPER NUMBER
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1617

DATE MAILED:

10/30/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/145,180

Applicant(s)

LI ET AL.

Examiner

Shengjun Wang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 184-233 is/are pending in the application.

4a) Of the above claim(s) 193-195, 197-206, 208, 214, 215, 218, 219, 221-223, 226 and 231-233 is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 184-192, 196, 207, 209-213, 216-217, 220, 224, 225, 227-230 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Receipt of the amendment and remarks submitted August 24, 2000 is acknowledged.

1. Claims 193-195, 197-206, 208, 214, 215, 218-219, 221-223, 226, 231-233 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 13.

Duplicate Claims

2. Applicant is advised that should claim 210 be found allowable, claims 217, 224, 227 and 229 will be objected to under 37 CFR 1.75 as being an exact duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Applicant is advised that should claim 216 be found allowable, claims 220, 225, 228 and 230 will be objected to under 37 CFR 1.75 as being an exact duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims Rejections 35 U.S.C. - 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 184-192, 196, 207, 209-213, 216-217, 220, 224, 225, 227-230 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weltin et al. (AT of page 5, IDS paper No. 3) in view of Suto et al (AR, IDS paper No. 4) and Endres et al. (AT of page 2, IDS paper No. 3) for reasons essentially the same as stated in the prior office action. Regarding the limitation, "having an IC50 of 100 um or low for inhibiting PARP in vitro," now in the base claim, claim 184 (in original claim 120), note that Weltin et al. teach that that 6(5H)-phenanthrindinone, an isoquinoline derivative, is a potent inhibitor of poly(ADP-ribose) polymerase (PARP). Weltin further state that 6(5H)-phenanthrindinone blocks the activity of PARP at micro molar concentration. See, particularly, page 399 the left column in Weltin et al. Therefore, it would have been reasonably expected that 6(5H)-phenanthrindinone or its substituted derivatives has the activity claimed herein.

6. Applicants' remarks submitted August 24, 2000 have been fully considered, but are not persuasive for reasons discussed below.

7. Regarding the remarks that Suto's teaching of derivatization is regard to isoquinolinones not phenathridinones, note that phenanthrindinones are generally considered as derivatives of isoquinolinones. See, the abstract of Weltin et al. A person of ordinary skill in the art would have been motivated to modify or optimize the structure of 6(5H)-phenanthrindinone for similar or better activity. Further, considering the limited number of substituents and variable positions for substitution on 6(5H)-phenanthrindinone. The modification or optimization is reasonably considered within the skill of artisan.

Nothing unobvious is seen in the claimed invention.

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8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

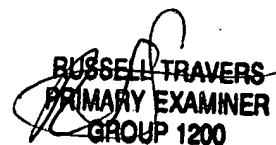
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang, Ph.D. whose telephone number is (703) 308-4554. The examiner can normally be reached on Monday-Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minna Moezie, J.D., can be reached on (703) 308-4612. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Shengjun Wang

October 28, 2000


RUSSELL TRAVERS
PRIMARY EXAMINER
GROUP 1200